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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/160,728 09/25/98 LEWAK

J

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LM02/0816

EXAMINER

SEALEY, L

ART UNIT

PAPER NUMBER

2772

DATE MAILED:

08/16/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/160,728

Applicant(s)

LEWAK, JERZY

Examiner

Lance W. Sealey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 1998.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of 35 U.S.C. 102(e) which forms the basis for all novelty-related rejections set forth in this Office action:

A person shall be entitled to a patent unless—

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by applicant for patent.

2. Claims 1-4, 7-8, 12-14 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakayama et al. ("Nakayama," U.S. Pat. No. 5,732,001).

3. With respect to claims 1 and 12, Nakayama, in disclosing a calculator with stepwise display of linear equations, also discloses a method of presenting, on a computer controlled display device, transformation rules of abstract representations using animations to simulate continuous transformations, where said presentation is for use in the teaching of said presentation rules (Abstract, first sentence).

4. Concerning claim 2, Nakayama also discloses a method of presenting transformation rules of abstract representations using animations to simulate continuous transformations where said presentation is for use in teaching said transformation rules (Abstract, third sentence).

5. Regarding claims 3 and 13, Nakayama also teaches (a) calculating intermediate abstract representation between a starting and an ending representation; and (b) animating said transformation process by displaying sequentially on said display device, said intermediate representations, as is

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customary in the art of animation, making the transformation appear continuous (Abstract, first sentence).

6. With respect to claims 4 and 14, Nakayama discloses an equation as an abstract representation (Abstract, first sentence).

7. Concerning claims 7-8 and 17-18, Nakayama discloses means for accepting and responding to user input (col.9, ll.15-16) and changing said display in response to said user input (col.9, ll.10-14).

8. In view of the foregoing, it is concluded that claims 1-4, 7-8, 12-14 and 17-18 have been anticipated by Nakayama.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 5 is rejected, under 35 U.S.C. 103(a) as being unpatentable by Nakayama in view of Weinreich (U.S. Pat. No. 5,535,421).

11. Nakayama further discloses a means for (a) moving of a symbol or symbols along a prescribed path (col.9, ll.23-27); (b) changing of set symbol or symbols to other symbol or

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symbols (left shift key **3h**, FIG. 1); and (d) and (e) causing said symbol or symbols to fade in and out (when the screen changes to display a new equation, symbols fade out so that new symbols can fade in). However, the Nakayama inventors did not disclose a means for the splitting of said symbol or symbols into multiple copies; this is taught by Weinreich's chord keyboard system at col.12, ll.5-24).

12. Therefore, it would have been obvious to a person with ordinary skill in the art at the time this invention was made to give the Nakayama keys the ability to repeat symbols. This makes it easier for the user to type a long line of repeated characters (Weinreich, col.12, ll.7-13).

13. Claims 6, 8-11, 16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable by Nakayama in view of Tseng (British Pat. No. 2 127 200 A).

14. Nakayama does not disclose a means for manipulating an animated picture and projecting a voice accompaniment to what is displayed. These elements are disclosed by Tseng.

15. With respect to applicant's claims 6 and 16, Tseng, which discloses a music and arithmetic teaching machine, also discloses a means for displaying an animated picture and sequencing the animations of the picture with said animations of said representations (Abstract, third sentence).

16. Therefore, it would have been obvious to a person with ordinary skill in the art at the time this invention was made to substitute the Nakayama RAM 13 (FIG.2) for the Tseng RAM 13 (FIG.1) and incorporate the program running in the Nakayama CPU 10 (FIG.2) in the Tseng CPU 11 (FIG.1) in order to fulfill applicant's claims. Such a combination would jointly and clearly express numerical concepts to raise a user's learning interest and learning effect (Tseng, Abstract,

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third sentence).

17. The other claims in this rejection will now be considered: With respect to claims 9 and 19, Tseng further comprises computer controlled voice explanations of said animations, and means of synchronizing said voice with said animations (Abstract, third sentence).

18. Concerning claims 10 and 20, Tseng additionally comprises (a) means for converting text to speech, and (b) a method of using a text script to control the synchronization of the voice with the animations (Abstract, third sentence).

19. Finally, regarding claim 11, Tseng additionally comprises means for evaluating, in real time, the context dependent content in said voice explanations (13, FIG. 7).

20. Therefore, in view of the foregoing, it is concluded that claims 6, 8-11, 16 and 18-20 are rendered unpatentable by Nakayama and Tseng.

Conclusion

21. Any inquiry concerning this communication should be directed to Lance W. Sealey at (703) 305-0026.



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